Part 2 -- Amendment to the Claims

1. (Amended) A support contour for contacting and supporting a person in a sitting position when the person is seated on the support contour, comprising:

relief areas defined by the support contour at locations adjacent to skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum of the person ~~sitting~~ when the person is seated on the support contour; and

support areas adjacent to skin covering tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thighs of the person when the person is seated on the support contour; and wherein:

the relief areas and support areas are spaced relatively more away from and relatively more toward an expected representation of the anatomical shape of the pelvic area of the person when the person is seated on the support contour, respectively, ~~to establish relatively less~~ the relatively more away from spacing of the relief areas substantially offloading support pressure on the skin ~~in the relief areas and~~ adjacent to the ischial tuberosities, the greater trochanters and the coccyx and sacrum when the person is seated on the support contour, and the relatively more ~~pressure on the skin in~~ toward spacing of the support areas transferring substantially the entire pressure and support force for supporting the person to the skin and tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thighs when the person is seated on the support contour.

2. (Canceled)

3. (Original) A support contour as defined in claim 1, wherein:

the relief area adjacent to the coccyx and sacrum substantially eliminates pressure on the skin adjacent to the coccyx and sacrum.

4. (Original) A support contour as defined in claim 3, wherein:

the relief area adjacent to the coccyx and sacrum is separated from the skin adjacent to the coccyx and sacrum.

5. (Canceled)

6. (Amended) A support contour as defined in claim 1, wherein:

the relief area adjacent to the ischial tuberosities has sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively less~~ substantially eliminate support pressure on the skin covering the ischial tuberosities during normal forward and backward pivoting movement of the pelvis and upper torso of the person ~~sitting~~ when seated on the support contour.

7. (Amended) A support contour as defined in claim 6, wherein:

the dimensions of the relief area adjacent to the ischial tuberosities are also sufficient to ~~establish the relatively less~~ substantially eliminate support pressure on the skin covering the ischial tuberosities during normal lateral tilting movement of the upper torso of the person ~~sitting~~ when seated on the support contour.

8. (Amended) A support contour as defined in claim 1, wherein:

the relief ~~area~~ areas adjacent to the greater trochanters ~~has~~ have sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively less~~ offload support pressure on the skin covering the greater trochanters during movement within an anticipated range of normal ~~contacting~~ movement and support positions of the person when seated on the support contour.

9. (Amended) A support contour as defined in claim 1, wherein:

the support areas on opposite lateral sides of the posterior buttocks ~~contact the skin covering the tissue masses~~ induce an upward component of support force on the opposite lateral sides of the posterior buttocks ~~to induce an upward component of support force on the~~ pelvic area of the person when seated on the support contour.

10. (Amended) A support contour as defined in claim 1, wherein:

the support areas beneath the proximal thighs ~~to function~~ interact with the thigh leg bones in a fulcrum-like manner to ~~transfer~~ create support force at the hip joints from weight ~~from~~ of the legs distal to the proximal thighs ~~in a lever-like manner through hip joints to the pelvic area of the person~~ when the person is seated on the support contour.

11. (Amended) A support contour as defined in claim 10, wherein:

the ~~location~~ locations of the support areas beneath the proximal thighs ~~establishes~~ of the person when seated on the support contour establish a lever-like mechanical advantage for ~~transferring~~ increasing the amount of support force at the hip joints from the weight ~~from~~ of the distal legs ~~to the pelvic area.~~

12. (Amended) A support contour as defined in claim 1, comprising:

a back wall for surrounding the rear pelvic area of the person when seated on the support contour;

a center cavity located directly below the ischial tuberosities of the person ~~sitting~~ when seated on the support contour, the ~~cavity~~ back wall curving downwardly and longitudinally forwardly and transversely inwardly ~~from the back wall~~ to a generally horizontal lowermost surface area of the cavity; and wherein:

the lowermost surface area of the cavity is at a location vertically spaced below the ischial tuberosities ~~and~~ of the person when seated on the support contour, the cavity has longitudinal and transverse dimensions relative to the ischial tuberosities ~~to establish the relatively less~~ of the person when seated on the support contour to substantially eliminate support pressure on the skin covering the ischial tuberosities during movement within an anticipated range of forward, backward and side to side movement of the upper torso of the person ~~sitting~~ when seated on the support contour; and

the lowermost surface area constitutes one relief area.

13. (Amended) A support contour as defined in claim 12, further comprising:

a lateral area on each opposite transverse side of the cavity and located transversely to the outside of and vertically below the greater trochanters of the person ~~sitting~~ when seated on the support contour, each lateral area generally curving vertically downwardly and transversely inwardly from an outer periphery of the support contour to intersect transverse opposite sides of the cavity at a position above the ischial tuberosities of the person ~~sitting~~ when seated on the support contour, ~~the~~ each lateral ~~relief~~ area also extending longitudinally relative to the greater trochanters of the person ~~sitting~~ when seated on the support contour; and wherein:

~~the~~ each lateral area has sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively less~~ substantially offload support pressure on the skin covering the greater trochanters during movement of the upper torso within an anticipated range of ~~different contacting support~~ movement positions of the person when seated on the support contour; and

each lateral area constitutes one relief area.

14. (Amended) A support contour as defined in claim 13, further comprising:

a posterior thigh protrusion area located beneath the skin covering the tissue masses at each of the posterior thighs of the person ~~sitting~~ when seated on the support contour, each posterior thigh protrusion area located on transversely ~~oppositely~~ opposite sides of a longitudinal midline through the support contour, each posterior thigh protrusion area positioned vertically above and longitudinally forward of each lateral area, each posterior thigh protrusion area defining an upwardly facing fulcrum-like contact surface at a ~~posterior position of the thigh leg bone~~ position adjacent each posterior thigh leg bone of the person when seated on the support contour; and wherein:

~~the~~ each posterior thigh ~~areas have~~ protrusion area has sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively greater~~

~~pressure on~~ transfer support force to the skin covering the tissue masses at the posterior thighs;

the fulcrum-like contact surfaces transferring ~~force~~ weight from the legs distal to the proximal thighs in a lever-like manner through the thigh leg bones to elevate the greater trochanters relative to the lateral areas ~~while~~ when the person is ~~sitting~~ seated on the support contour; and

each posterior thigh protrusion area constitutes a support area.

15. (Amended) A support contour as defined in claim 12, further comprising:

a channel area located directly behind the coccyx and sacrum of the person ~~sitting~~ when seated on the support contour, the channel area extending downwardly and longitudinally forwardly from the back wall toward the lowermost surface area of the cavity at a transverse midline of the support contour; and wherein:

the channel area has dimensions extending longitudinally and transversely relative to the coccyx and sacrum ~~to establish the relatively less~~ of the person when seated on the support contour to substantially eliminate support pressure on the skin covering the coccyx and sacrum during an anticipated range of normal movement of the pelvic area of the person ~~while sitting~~ when seated on the support contour; and

the channel area constitutes a relief area.

16. (Amended) A support contour as defined in claim 15, further comprising:

a pelvic protrusion area located adjacent the skin covering the tissue masses at the opposite lateral posterior buttocks of the person ~~sitting~~ when seated on the support contour, each pelvic protrusion area located at transversely oppositely spaced positions from the channel area, each pelvic protrusion area generally curving vertically downwardly and transversely and longitudinally

inwardly from the back wall toward the lowermost surface area, each pelvic protrusion area terminating vertically above the lowermost surface area, each pelvic protrusion area defining a forwardly and upwardly facing contact surface to contact the skin covering the tissue masses at the lateral posterior buttocks of the person when seated on the support contour; and wherein:

the forwardly and upwardly facing contact surfaces transferring support force to the tissue masses at the opposite lateral posterior buttocks to substantially offload support pressure from the skin covering the coccyx and sacrum ~~while~~ when the person is ~~sitting~~ seated on the support contour; and

each pelvic protrusion area constitutes a support area.

17. (Original) A support contour as defined in claim 16, wherein:

the contact surfaces of the protrusion areas extend forwardly into the cavity compared to the channel area.

18. (Amended) A support contour as defined in claim 12, further comprising:

a pelvic protrusion area located adjacent the skin covering the tissue masses at the opposite lateral posterior buttocks of the person ~~sitting~~ when seated on the support contour, each pelvic protrusion area located at transversely oppositely spaced positions from a longitudinal midline through the support contour, each pelvic protrusion area generally curving vertically downwardly and transversely and longitudinally inwardly from the back wall toward the lowermost surface area, each pelvic protrusion area terminating vertically above the lowermost surface area, each pelvic protrusion area defining a forwardly and upwardly facing contact surface to contact the skin covering the tissue masses at the lateral posterior buttocks when the person is seated on the support contour; and wherein:

the pelvic protrusion areas have sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively greater pressure on~~ transfer

support force to the skin covering the tissue masses at the opposite lateral posterior buttocks when the person is seated on the support contour;

the forwardly and upwardly facing contact surfaces transferring support force to the tissue masses at the opposite lateral posterior buttocks to support the posterior pelvic area substantially only at the pelvic protrusion areas ~~while~~ when the person is ~~sitting~~ seated on the support contour; and

each pelvic protrusion area constitutes a support area.

19. (Amended) A support contour as defined in claim 12, further comprising:

a posterior thigh protrusion area located beneath the skin covering the tissue masses at each of the posterior thighs of the person ~~sitting~~ when seated on the support contour, each posterior thigh protrusion area located respectively on transversely oppositely sides of a longitudinal midline through the support contour, each posterior thigh protrusion area positioned vertically above and longitudinally forward of the lowermost surface area, each posterior thigh protrusion area defining an upwardly facing fulcrum-like contact surface ~~at~~ adjacent to a posterior position of the thigh leg bone of the person when seated on the support contour; and wherein:

the posterior thigh protrusion areas have sufficient longitudinal, transverse and vertical dimensions to ~~establish the relatively greater pressure on~~ transfer support force to the skin ~~covering~~ and the tissue masses at the posterior thighs~~;~~ when the person is seated on the support contour;

the interaction of the thigh leg bones with the fulcrum-like contact surfaces ~~transferring~~ creating support force in a lever-like manner from the weight of the legs distal to the proximal thighs ~~in a lever-like manner through the thigh bones~~ and transferring that support force to the hip joints to support the anterior and lateral pelvic area ~~while~~ when the person is ~~sitting~~ seated on the support contour; and

each posterior thigh protrusion area constitutes a support area.

20. (Original) A support contour as defined in claim 1 incorporated in a wheelchair seat cushion.

21. (Amended) A support contour as defined in claim 1, further comprising:

a clearance area defined by the support contour at a location adjacent to a perineal area of the person when seated on the support contour, ~~to establish~~ the clearance area establishing space for air circulation at the perineal area.

22. (Amended) A method of configuring a support contour to contact and support a person in a sitting position when the person is seated on the support contour, comprising:

defining relief areas in the support contour at locations adjacent to skin covering the ischial tuberosities, the greater trochanters and the coccyx and sacrum of the person ~~sitting~~ when the person is seated on the support contour;

defining support areas in the support contour at locations adjacent to skin covering tissue masses on opposite lateral sides of the posterior buttocks and beneath the proximal thighs of the person when the person is seated on the support contour; ~~and~~

positioning the relief areas and the support areas to establish a relatively greater clearance with respect to the ischial tuberosities, the greater trochanters and the coccyx and sacrum ~~of the person sitting on the support contour compared~~ and to establish a relatively lesser clearance with respect to the tissue masses on the opposite lateral sides of the posterior buttocks and beneath the proximal thighs of the person ~~sitting~~ when the person is seated on the support contour;

establishing the relatively greater clearance of the relief areas and the relatively lesser clearance of the support areas respect to an expected

representation of the anatomical shape of the pelvic area of the person when the person is seated on the support contour;

establishing the relatively greater clearance of the relief areas to substantially offload support pressure on the skin adjacent to the ischial tuberosities, the greater trochanters and the coccyx and sacrum when the person is seated on the support contour; and

establishing the relatively lesser clearance of the support areas to transfer substantially the entire support force for supporting the person on the support contour to the lateral posterior buttocks and the proximal thighs by the support areas when the person is seated on the support contour.

23. (Canceled)

24. (Amended) A method as defined in claim ~~21~~ 22, further comprising:

~~positioning~~ establishing the relatively greater clearance of the relief areas ~~relative~~ to ~~the~~ substantially eliminate support ~~areas to maintain the relatively less~~ pressure on the skin covering the ischial tuberosities during forward and backward pivoting movement and lateral tilting movement of the upper torso of the person ~~sitting~~ when seated on the support contour.

25. (Amended) A method as defined in claim ~~21~~ 22, further comprising:

~~positioning~~ establishing the relatively greater clearance of the relief areas ~~relative~~ to ~~the~~ substantially offload support ~~areas to maintain the relatively less~~ pressure on the skin covering the greater trochanters during movement within an anticipated range of normal ~~contacting support~~ sitting positions of the person when seated on the support contour.

26. (Amended) A method as defined in claim 22, further comprising:

positioning the support areas ~~on opposite lateral sides of the posterior buttocks~~ to contact the skin covering the tissue masses on ~~the~~ opposite lateral sides of the posterior buttocks to induce an upward component of support force on the pelvic area of the person when seated on the support contour.

27. (Amended) A method as defined in claim 22, further comprising:

positioning the support areas beneath the proximal thighs at an elevated position relative to the relief areas below the greater trochanters, the support areas beneath the proximal thighs establishing ~~a fulcrum~~ fulcrums from which the thigh leg bones transfer weight from the legs distal to the proximal thighs to the hip joints to elevate the greater trochanters relative to the relief ~~area~~ areas adjacent to the skin covering the greater trochanters of the person when seated on the support contour.

28. (Canceled)

29. (Amended) A method as defined in claim 22, further comprising:

positioning the support areas on opposite lateral sides of the posterior buttocks to induce an upward component of support force on the tissue masses on the opposite lateral sides of the posterior buttocks of the person ~~sitting~~ when seated on the support contour; and

positioning the support areas beneath the proximal thighs at an elevated position relative to the relief areas below the greater trochanters to establish ~~a fulcrum~~ fulcrums from which the thigh leg bones transfer weight from the legs distal to the proximal thighs to the hip joints to elevate the greater trochanters relative to the relief area adjacent to the skin covering the greater trochanters of the person ~~sitting~~ when seated on the support contour.

30. (Amended) A method as defined in claim 22 applied to configuring a support contour of a seat cushion for wheelchair.

31. (Amended) A method of supporting a person in a sitting position on a support contour when the person is seated on the support contour, comprising:

transferring the substantial ~~majority~~ entirety of support force associated with supporting the person on the support contour to skin ~~covering~~ and tissue masses on opposite lateral sides of the posterior buttocks and beneath the

proximal thighs of the person ~~while the person is sitting~~ when seated on the support contour; and

substantially ~~diminishing~~ offloading support pressure and shear from skin ~~surrounding~~ adjacent the ischial tuberosities, the greater trochanters and the coccyx and sacrum of the person when seated on the support contour by transferring the ~~sitting-associated force~~ support force to the tissue masses at the posterior lateral buttocks and the proximal thighs.

32. (Amended) A method as defined in claim 31, further comprising:

substantially ~~diminishing the~~ eliminating support pressure and shear force on the skin surrounding the ischial tuberosities during an anticipated range of normal forward, backward and side to side movement of the upper torso of the person ~~while~~ when seated on the support contour.

33. (Amended) A method as defined in claim 31, further comprising:

substantially ~~diminishing the~~ offloading support pressure and shear force on the skin surrounding the greater trochanters ~~within~~ during an anticipated range of ~~different contacting~~ normal sitting positions of the person ~~sitting~~ when seated on the support contour.

34. (Amended) A method as defined in claim 31, further comprising:

substantially ~~diminishing the~~ eliminating support pressure and shear force on the skin surrounding the coccyx and sacrum during an anticipated range of normal movement of the pelvic area of the person ~~sitting~~ when seated on the support contour.

35. (Amended) A method as defined in claim 31, further comprising:

~~transferring at least some of the sitting-associated force by~~ inducing an upward component of support force on the tissue masses on the opposite lateral sides of the posterior buttocks of the person ~~sitting~~ when seated on the support contour.

36. (Amended) A method as defined in claim 31, further comprising:

transferring weight from the legs distal to the proximal thighs in a lever-like manner through the thigh leg bones to the hip joints as support force to elevate the greater trochanters ~~while~~ of the person ~~is~~ when seated on the support contour.

37. (Amended) A method as defined in claim 31, applied to supporting the person ~~from~~ in a sitting position on the support contour of a wheelchair seat cushion.

38. (Previously Added) A support contour as defined in claim 1 incorporated in a support structure for a cushion, the support structure comprising a matrix of resilient adhered-together plastic beads.

39. (Previously Added) A support contour as defined in claim 38, wherein the adhered-together plastic beads define spaces between the beads to establish permeability for air movement within the support structure.

40. (Previously Added) A method as defined in claim 22, further comprising:

incorporating the support contour in a support structure of a cushion; and

forming the support structure from a matrix of resilient adhered-together plastic beads.

41. (Previously Added) A method as defined in claim 40, further comprising:

allowing air movement within the support structure through spaces between the adhered-together plastic beads.

42. (Previously Added) A method as defined in claim 31, further comprising:

incorporating the support contour in a support structure of a cushion; and

forming the support structure from a matrix of resilient adhered-together plastic beads.

43. (Previously Added) A method as defined in claim 42, further comprising:

allowing air movement within the support structure through spaces between the adhered-together plastic beads.

44. (New) A support contour as defined in claim 10, wherein:

the location of the support areas beneath the proximal thighs of the person when seated on the support contour causes the weight from the distal legs to induce an upward component of support force at the hip joints of the person when seated on the support contour.

45. (New) A support contour as defined in claim 1, wherein:

the support areas on opposite lateral sides of the posterior buttocks induce an upward and forward component of support force on the opposite lateral sides of the posterior buttocks pelvic area of the person when seated on the support contour;

the support areas beneath the proximal thighs interact with the thigh leg bones in a fulcrum-like manner to create lifting support force at the hip joints from weight of the legs distal to the proximal thighs when the person is seated on the support contour; and

the upward and forward component of support force from the support areas on opposite lateral sides of the posterior buttocks prevents the pelvic area of the person from tipping backward in response to the lifting support force at the hip joints.

46. (New) A support contour as defined in claim 45, comprising:

a back wall for surrounding the rear pelvic area of the person when seated on the support contour;

a center cavity located directly below the ischial tuberosities of the person when seated on the support contour, the back wall curving downwardly and longitudinally forwardly and transversely inwardly to a generally horizontal lowermost surface area of the cavity; and wherein:

the support areas on opposite lateral sides of the posterior buttocks curve vertically downward and transversely and longitudinally forward from an upper position on the back wall toward the lowermost surface area of the cavity; and

the support areas beneath the proximal thighs are vertically located relatively closer to the horizontal lowermost surface area of the cavity than uppermost portions of the support areas on opposite lateral sides of the posterior buttocks at the back wall.

47. (New) A support contour as defined in claim 19, comprising:

a back wall for surrounding the rear pelvic area of the person when seated on the support contour; and wherein:

the pelvic protrusion areas curve vertically downward and transversely and longitudinally forward from an upper position on the back wall toward the lowermost surface area of the cavity;

the support force from the pelvic protrusion areas prevents the pelvic area of the person from tipping backward in response to the support force at the hip joints when the person is seated on the support contour; and

the posterior thigh protrusion areas are vertically located relatively closer to the horizontal lowermost surface area of the cavity than uppermost portions of the pelvic protrusion areas at the back wall.

48. (New) A method as defined in claim 29, further comprising:

positioning the support areas beneath the proximal thighs to induce an upward component of support force at the hip joints created by the weight of the distal legs interacting in a lever-like manner with the support areas beneath the

proximal thighs, the upward component of support force induced by the weight of the distal legs cooperating with the upward component of support force from the support areas on the opposite lateral sides of the posterior buttocks to transfer substantially the entire support force to the pelvic area of the person when seated on the support contour.

49. (New) A method as defined in claim 29, further comprising:

preventing the pelvic area of the person from tipping backward in response to the upward component of support force at the hip joints by applying a forward component of support force and the upward component of support force from the support areas on opposite lateral sides of the posterior buttocks to the rear pelvic area of the person when seated on the support contour.

50. (New) A method as defined in claim 49, further comprising:

applying the upward and forward component of support force from the support areas on opposite lateral sides of the posterior buttocks beginning at an uppermost position on the rear pelvic area of the person which is greater in relative height than the support areas beneath the proximal thighs.

51. (New) A method as defined in claim 31, further comprising:

inducing an upward and forward component of support force on the tissue masses on the opposite lateral sides of the posterior buttocks of the person when seated on the support contour;

transferring weight from the legs distal to the proximal thighs in a lever-like manner through the thigh leg bones to the hip joints as support force to elevate the greater trochanters of the person when seated on the support contour; and

preventing the pelvic area of the person from tipping backward in response to the support force at the hip joints by applying the upward and forward component of support force on the opposite lateral sides of the posterior buttocks to the rear pelvic area of the person when seated on the support contour.

52. (New) A method as defined in claim 51, further comprising:

applying the upward and forward component of support force from the support areas on opposite lateral sides of the posterior buttocks beginning at an uppermost position on the rear pelvic area of the person which is greater in relative height than the point at which the weight from the legs distal to the proximal thighs is transferred in a lever like manner through the thigh leg bones to the hip joints.